

Comparison of pain score between two different transcostal and pericostal thoracotomy closure in patients' candidate for surgery in Velayat hospital of Qazvin

Abstract

Background: One of the most important complications of chest surgery is chronic post thoracotomy pain, which is due to entering the chest and cutting off intercostal muscles and opening the pleura and spreading of the ribs. Regarding the role of pain in post-operative discomfort and its effect on the patients quality of life, in this study deal with to the comparison of post-operative pain after thoracotomy between TC and PC.

Methods: Study was done as double blinded, clinical trial on patients with age from 18 to 75 years who underwent thoracotomy by anterolateral or posterolateral methods at Velayat hospital of Qazvin. Exclusion criteria were including drug use, bone metastasis, surgery time for more than 5 hours and recent use of NSIDs. Patients were randomly divided into two groups based on the method of suture used to close the ribs. In the PC group, the ribs are closed by passing suture from the upper edge of the superior rib and from the inferior side of the lower rib. In the TC group, the holes are created in the inferior rib by the drill, and then the ribs are closed by passing suture into the holes and upper edge of superior rib. Pain was assessed by visual analogues scale (VAS) during 1, 4, 8, 24 and 48 hours after surgery. For relieving pain, pethidine with dose of 0.5 mg/kg for VAS>4 or diclofenac was used in the mentioned times.

Results: Data of 17 patients candidate of thoracotomy was evaluated by transcostal (51.5%) and 16 patients by pericostal (48.5%) methods. Mean pain and required palliative drug after surgery were significantly less in Transcostal method. ($p<0.05$) Mean pain in pericostal method was less in male only during one hour after surgery, but differences by gender was not observed in the other times.

Conclusion: Using of transcostal method versus pericostal is suggested for reducing pain and need to palliative drug after thoracotomy.

Key words: thoracotomy, transcostal, pericostal, pain.